

CLAIMS:

1. A driver pulley system for use in a torque converter, the driver pulley system comprising
 - 5 a fixed unit adapted to be fixed to a rotatable engine output for rotation therewith, the fixed unit including a fixed flange and a cover,
 - a centrifugal weight unit, and
 - a movable unit configured to move relative to the fixed unit, the movable unit including a movable flange configured to cooperate with the fixed
 - 10 flange to receive a belt of the torque converter therebetween, the centrifugal weight unit being positioned between the movable flange and the cover and configured to move the movable flange toward the fixed flange in response to centrifugal force, the cover axially covering the centrifugal weight unit, the movable unit including means
 - 15 for transmitting torque from the movable flange to the cover through a path not including the centrifugal weight unit for transmission of torque to the engine output upon application of torque to the movable flange by the belt.
2. The driver pulley system of claim 1, wherein the cover includes a drive plate configured to rotate the movable unit and the torque transmission means includes a movable sleeve coupled to the movable flange, a slider mount coupled to
- 20 an outer surface of the movable sleeve, and a slider coupled to the slider mount for axial, slidable movement against the drive plate.
3. The driver pulley system of claim 2, wherein the slider mount includes an axially elongated block coupled to the outer surface of the movable sleeve and the slider includes an axially elongated collar fitted on the block and engaging
- 25 spaced-apart first and second drive plate tabs included in the drive plate, an axially elongated first slider tab cantilevered to the collar and engaging an edge of the first drive plate tab, and an axially elongated second slider tab cantilevered to the collar and engaging an edge of the second drive plate tab.
4. The driver pulley system of claim 1, wherein the cover includes
- 30 a base plate and three drive plates coupled to the base plate and spaced about 120° apart from one another to rotate the fixed unit, the torque transmission means includes a movable sleeve coupled to the movable flange, three slider mounts coupled to the movable sleeve and spaced about 120° apart from one another, and three sliders, and

each slider is coupled to one of the slider mounts and configured for axial, slidable movement against one of the drive plates.

5. A driver pulley system for use in a torque converter, the driver pulley system comprising
- 5 a fixed unit adapted to be fixed to a rotatable engine output for rotation therewith, the fixed unit including a fixed flange and a cover,
- a centrifugal weight unit, and
- a movable unit configured to move relative to the fixed unit, the movable unit including a movable flange configured to cooperate with the fixed
- 10 flange to receive a belt of the torque converter therebetween, the centrifugal weight unit being positioned between the movable flange and the cover and configured to move the movable flange toward the fixed flange in response to centrifugal force, the cover axially covering the centrifugal weight unit, the movable unit including a torque
- transmission device configured to transmit torque from the movable flange to the
- 15 cover through a path not including the centrifugal weight unit upon application of torque to the movable flange by the belt.

6. The driver pulley system of claim 5, wherein the cover includes a drive plate configured to rotate the movable unit and the torque transmission device includes a slider configured for axial, slidable movement against the drive plate.

- 20 7. The driver pulley system of claim 6, wherein the torque transmission device includes a movable sleeve coupled to the movable flange and a slider mount coupled to the movable sleeve and the slider is coupled to the slider mount.

8. The driver pulley system of claim 7, wherein the slider mount
- 25 includes a block coupled to an outer surface of the movable sleeve and the slider includes a collar fitted on the block and engaging the drive plate.

9. The driver pulley system of claim 8, wherein the drive plate includes a drive plate tab mount and first and second drive plate tabs extending from the drive plate tab mount and cooperating with the drive plate tab mount so that the
- 30 drive plate has a U-shaped cross-section, the collar is positioned between the first and second drive plate tabs and includes an axially elongated first side wall engaging the first drive plate tab, an axially elongated second side wall engaging the second drive plate tab, and a pair of end walls extending between the first and second side walls,

and the slider includes an axially elongated first slider tab cantilevered to the first side wall and engaging an edge of the first drive plate tab and an axially elongated second slider tab cantilevered to the second side wall and engaging an edge of the second drive plate tab.

5 10. The driver pulley system of claim 6, wherein the slider includes a collar and a slider tab cantilevered to the collar, the collar is fitted on a block included in the torque transmission device and engages a drive plate tab included in the drive plate, and the slider tab engages an edge of the drive plate tab.

10 11. The driver pulley system of claim 6, wherein the slider includes a collar engaging the drive plate.

12. The driver pulley system of claim 6, wherein the drive plate engages the slider to block radially outward movement of the slider.

13. The driver pulley system of claim 6, wherein the slider is positioned radially inwardly from the drive plate.

15 14. The driver pulley system of claim 5, wherein the cover includes a base plate and three drive plates coupled to the base plate and spaced about 120° apart from one another to rotate the fixed unit, the torque transmission device includes three sliders spaced about 120° apart from one another, and each slider is configured for axial, slidable movement against one of the drive plates.

20 15. The driver pulley system of claim 5, wherein the torque transmission device is positioned radially inwardly from the centrifugal weight unit.

16. A driver pulley system for use in a torque converter, the driver pulley system comprising

25 a fixed unit adapted to be fixed to a rotatable engine output for rotation therewith, the fixed unit including a fixed flange and a cover,

 a centrifugal weight unit, and

 a movable unit configured to move relative to the fixed unit, the movable unit including a movable flange configured to cooperate with the fixed flange to receive a belt of the torque converter therebetween, the centrifugal weight unit being positioned between the movable flange and the cover and configured to move the movable flange toward the fixed flange in response to centrifugal force, the cover axially covering the centrifugal weight unit, the movable unit including a torque transmission device including a slider configured for axial, slidable movement against

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the cover for transmission of torque from the movable flange to the cover through a path including the slider but not including the centrifugal weight unit upon application of torque to the movable flange by the belt and axial movement of the movable flange away from the fixed flange due to radially inward movement of the belt.

5 17. The driver pulley system of claim 16, wherein the cover includes a drive plate configured to rotate the movable unit, the movable unit includes a movable sleeve coupled to the movable flange and a slider mount coupled to the movable sleeve, and the slider is coupled to the slider mount for axial, slidable movement against the drive plate for transmission of torque, in series, from the
10 movable flange through the movable sleeve, the slider mount, and the slider to the drive plate.

 18. The driver pulley system of claim 17, wherein the slider mount includes a block coupled to an outer surface of the movable sleeve, the slider includes a collar fitted on the block and a slider tab cantilevered to the collar, the collar
15 engages a drive plate tab included in the drive plate to transmit torque to the drive plate tab, and an edge of the drive plate tab engages the slider tab to block radially outward movement of the slider.

 19. The driver pulley system of claim 17, wherein the movable sleeve includes first and second end portions, the movable flange is coupled to the
20 first end portion, and the slider mount is coupled to the second end portion.

 20. The driver pulley system of claim 16, wherein the slider includes acetal.

 21. A driver pulley system for use in a torque converter, the driver pulley system comprising

25 first and second flanges adapted to receive a belt of the torque converter therebetween and to move axially relative to one another,

 a centrifugal weight unit being configured to move the first flange axially relative to the second flange in response to centrifugal force,

 a cover axially covering the centrifugal weight unit, the cover
30 including U-shaped drive plate configured for rotation of the first flange, and

 a torque transmission device including a sleeve coupled to the first flange for axial movement therewith, a slider mount coupled to the sleeve, and a T-shaped slider coupled to the slider mount and received by the drive plate for axial,

slidable movement against the drive plate, the torque transmission device being configured to transmit torque from the first flange to the drive plate through a path including the sleeve, the slider mount, and the slider but not including the centrifugal weight unit upon application of torque to the first flange by the belt.